

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: January 7, 2002, 16:05:24 ; Search time 77.81 Seconds
(without alignments)
21.676 Million cell updates/sec

Title: US-08-569-749-7

Perfect score: 269
Sequence: 1 LAAAGYYIGGDRVACGAC.....WEKDDANSEHRHFPNCPP 46

Scoring table:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 100059 seqs, 36664827 residues

Total number of hits satisfying chosen parameters: 100059

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_39.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	269	100.0	612	1 BIR3_HUMAN	Q13490 homo sapien
2	264	98.1	612	1 BIR3_MOUSE	Q62210 mus musculu
3	256	95.2	358	1 PIAP_PIG	Q62640 sus scrofa
4	248	92.2	604	1 BIR2_HUMAN	Q13489 homo sapien
5	241	89.6	600	1 BIR2_MOUSE	Q08863 mus musculu
6	192	71.4	497	1 BIR4_HUMAN	P98170 homo sapien
7	191	71.0	611	1 BIR_CHICK	Q90660 gallus gall
8	187	69.5	496	1 BIR4_MOUSE	Q90989 mus musculu
9	185	68.8	496	1 BIR4_RAT	Q91016 rattus norv
10	149	55.4	1403	1 BIR1_HUMAN	Q13075 homo sapien
11	141	52.4	1402	1 BIRG_MOUSE	Q91133 mus musculu
12	141	52.4	1403	1 BIRG_MOUSE	Q904X5 mus musculu
13	141	52.4	1403	1 BIRE_MOUSE	Q91136 mus musculu
14	141	52.4	1403	1 BIRE_MOUSE	Q91136 mus musculu
15	140	52.0	498	1 IAP2_DROME	Q24307 drosophila
16	138	51.3	1447	1 BIRB_MOUSE	Q90944 mus musculu
17	133.5	49.6	4829	1 BIRB_HUMAN	Q90944 mus musculu
18	132	49.1	268	1 IAP3_MOUSE	Q91019 homo sapien
19	129	48.0	438	1 IAP1_DROME	Q24306 drosophila
20	124	46.1	275	1 IAP1_MOUSE	Q24306 drosophila
21	117	43.5	239	1 ZFP_IVP6	P41436 cydia pomon
22	108.5	40.3	140	1 BIR5_MOUSE	P41732 chilo iride
23	108.5	40.3	140	1 BIR5_MOUSE	Q70201 mus musculu
24	104	38.7	997	1 BIR1_SCHPO	Q91137 rattus norv
25	102.5	38.1	142	1 BIR5_MOUSE	Q14064 schizosach
26	96	35.7	286	1 BIR5_HUMAN	Q15332 homo sapien
27	93	34.6	275	1 IAP1_MOUSE	Q10296 oryza pscu
28	80	29.7	249	1 IAP2_MOUSE	P41443 autographa
29	78.5	29.2	224	1 IAP1_MOUSE	Q65128 african swi
30	73.5	27.3	224	1 IAP1_MOUSE	Q11452 african swi
31	72.5	27.0	224	1 IAP1_MOUSE	Q11451 african swi
32	72.5	27.0	224	1 IAP1_MOUSE	Q12407 african swi
33	72.5	27.0	238	1 IAP1_MOUSE	Q11453 african swi

34	63.5	23.6	278	1 HUPJ_RHOCA	Q03009 rhodobacter
35	58.5	21.7	284	1 CELA_ACEXY	P27897 acetobacter
36	57	21.2	122	1 PA21_BORAS	P20474 borhops as
37	56.5	21.0	181	1 VG79_HSV1	Q00148 icturiid h
38	56	20.8	211	1 YP4D_CAEEL	Q11107 ceenothabdl
39	55	20.4	370	1 DPSD_CRIGR	P27465 cricetus
40	54.5	20.3	424	1 EXON_NPPOP	P24081 oryza pscu
41	54.5	20.3	517	1 DMPN_PSPSP	P19732 pseudomonas
42	54	20.1	644	1 ARRT_DROME	Q15945 drosophila
43	54	20.1	934	1 BIR1_YEAST	Q15945 drosophila
44	54	20.1	1004	1 ATRA_ARISF	P28774 saccharomyc
45	53.5	19.9	525	1 YBF4_YEAST	P34219 saccharomyc

ALIGNMENTS

RESULT 1	BIR3_HUMAN	STANDARD:	PRT: 618 AA.
ID	BIR3_HUMAN		
AC	Q13490: Q16516;		
DT	01-NOV-1997 (Rel. 35, Created)		
DT	01-NOV-1997 (Rel. 35, Last sequence update)		
DT	20-AUG-2001 (Rel. 40, Last annotation update)		
DE	BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 3 (INHIBITOR OF APOPTOSIS		
DE	PROTEIN 2) (H1AP2) (H1AP-2) (C-IAP1) (TNFR2-TRAF SIGNALING COMPLEX		
DE	PROTEIN 2) (IAP HOMOLOG B).		
GN	BIR3 OR AIP2 OR IAP2 OR MIBB.		
OS	Homo sapiens (Human).		
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;		
OC	Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.		
OX	NCBI_TaxID=9606;		
RN	[1]		
RP	SEQUENCE FROM N.A.		
RA	MEDLINE=96128127; PubMed=8548810;		
RT	Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;		
RT	"The TNFR2-TRAF signaling complex contains two novel proteins related		
RT	to baculoviral inhibitor of apoptosis proteins.";		
RL	Cell 83:1243-1252(1995).		
RN	[2]		
RP	SEQUENCE FROM N.A.		
RC	TISSUE=Liver;		
RX	MEDLINE=96149249; PubMed=8552191;		
RA	Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Chertion-Horvat G.;		
RA	Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;		
RT	"Suppression of apoptosis in mammalian cells by NAIP and a related		
RT	family of IAP genes.";		
RL	Nature 379:349-353(1996).		
RN	[3]		
RP	SEQUENCE FROM N.A.		
RC	TISSUE=Petal liver;		
RX	MEDLINE=96209843; PubMed=8643514;		
RA	Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.;		
RT	"Cloning and expression of apoptosis inhibitory protein homologs that		
RT	function to inhibit apoptosis and/or bind tumor necrosis factor		
RL	Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).		
RN	[4]		
RP	STRUCTURE BY NMR OF 266-363.		
RX	MEDLINE=99352054; PubMed=10404221;		
RA	Hinds M.G., Norton R.S., Vaux D.L., Day C.L.;		
RT	"Solution structure of a baculoviral inhibitor of apoptosis (IAP)		
RT	repeat.";		
RL	Nat. Struct. Biol. 6:648-651(1999).		
CC	-I- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS		
CC	WITH TNF RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO		
CC	FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR		
CC	NECROSIS FACTOR RECEPTOR 2 (TNFR2).		
CC	-I- SUBCELLULAR LOCATION: CYTOPLASMIC (POTENTIAL).		
CC	-I- TISSUE SPECIFICITY: PRESENT IN MANY FETAL AND ADULT TISSUES.		
CC	MAINLY EXPRESSED IN ADULT SKELETAL MUSCLE, THYMUS, TESTIS, OVARY,		
CC	AND PANCREAS, LOW OR ABSENT IN BRAIN AND PERIPHERAL BLOOD		
CC	LEUCOCYTES.		

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CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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CC -----
DR EMBL: LA9433; AAC41942.1; -.
DR EMBL: U45879; AAC50372.1; -.
DR EMBL: U37547; AAC50508.1; -.
DR DB: 1081; 20-OCT-99.
DR MIR: 601721; -.
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001315; CARD.
DR InterPro: IPR001841; Znf_fing.
DR Pfam: PF00653; BIR: 3.
DR Pfam: PF00619; CARD: 1.
DR Pfam: PF00097; zf-C3HC4; 1.
DR SMART: SM00238; BIR: 3.
DR SMART: SM00114; CARD: 1.
DR SMART: SM00184; RING: 1.
DR PROSITE: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
DR PROSITE: PS0209; CARD: 1.
DR Apoptosis: Zinc-finger; Repeat; 3D-structure.
KW REPEAT 46 113 BIR 1.
FT REPEAT 184 250 BIR 2.
FT REPEAT 269 336 BIR 3.
FT DOMAIN 453 539 CARD.
FT ZN_FING 571 605 RING-TYPE.
FT ZN_FING 157 157 S -> P (IN REF. 2).
FT CONFLICT 308 308 C -> G (IN REF. 2).
FT CONFLICT 414 414 O -> L (IN REF. 2).
FT CONFLICT 514 514 L -> W (IN REF. 2).
SQ SEQUENCE 618 AA; 69899 MW; C1778D328063586D CRC64;

Query Match
Best Local Similarity 100.0%; Score 269; DB 1; Length 618;
Matches 46; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 LABAGFYIGBDVACFCAGCGKLSNMPKDDAMSEHRHPPNCP 46
DB 204 LABAGFYIGBDVACFCAGCGKLSNMPKDDAMSEHRHPPNCP 249

RESULT 2
BIR3_MOUSE
ID BIR3_MOUSE STANDARD; PRT; 612 AA.
AC 062210; 008664;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 3 (INHIBITOR OF APOPTOSIS
DE PROTEIN 2) (MIAP2) (MIAP-2).
GN BIRC3 OR API2 OR IAP2.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID:10090;
RN [1]
RP SEQUENCE FROM N.A. AND PARTIAL SEQUENCE.
RX MEDLINE:6128127; PubMed:8548810;
RX Roche M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;
RT "The TNFR2-TNFR1 signaling complex contains two novel proteins related
RT to baculoviral inhibitor of apoptosis proteins."
RL Cell 83:1243-1253(1995).

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RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-Skeletal muscle;
RX MEDLINE:98110590; PubMed:9441758;
RX Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.;
RT "Genomic characterization of the mouse inhibitor of apoptosis protein
RT 1 and 2 genes."
RU Genomics 46:495-503(1997).
CC -1- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
CC WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
CC FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
CC NECROSIS FACTOR RECEPTOR 2 (TNFR2).
CC -1- SUBCELLULAR LOCATION: CYTOSOL; CYTOSOL (POTENTIAL).
CC -1- TISSUE SPECIFICITY: EXPRESSED IN HEART, BRAIN, SPLEEN, LUNG,
CC LIVER, SKELETAL MUSCLE, KIDNEY, AND TESTIS.
CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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CC -----
DR EMBL: LA9433; AAC42078.1; -.
DR EMBL: U88909; AAC53532.1; -.
DR MCD: MGI:1197009; Birc3.
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001315; CARD.
DR InterPro: IPR001841; Znf_fing.
DR Pfam: PF00653; BIR: 3.
DR Pfam: PF00619; CARD: 1.
DR Pfam: PF00097; zf-C3HC4; 1.
DR SMART: SM00238; BIR: 3.
DR SMART: SM00114; CARD: 1.
DR SMART: SM00184; RING: 1.
DR PROSITE: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
DR PROSITE: PS0209; CARD: 1.
DR Apoptosis: Zinc-finger; Repeat.
KW REPEAT 46 113 BIR 1.
FT REPEAT 177 242 BIR 2.
FT REPEAT 447 533 BIR 3.
FT DOMAIN 462 539 CARD.
FT ZN_FING 565 599 RING-TYPE.
FT CONFLICT 380 380 E -> K (IN REF. 2).
SQ SEQUENCE 612 AA; 69676 MW; E08969D93C6C610D CRC64;

Query Match
Best Local Similarity 98.1%; Score 264; DB 1; Length 612;
Matches 45; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

OY 1 LABAGFYIGBDVACFCAGCGKLSNMPKDDAMSEHRHPPNCP 46
DB 197 LABAGFYIGBDVACFCAGCGKLSNMPKDDAMSEHRHPPNCP 242

RESULT 3
PIAP_PIG
ID PIAP_PIG STANDARD; PRT; 358 AA.
AC 062640;
DT 15-DEC-1998 (Rel. 37, Created)
DT 15-DEC-1998 (Rel. 37, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE PUTATIVE INHIBITOR OF APOPTOSIS.
GN PIAP.
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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OC Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX NCBI_TaxID=9823;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Heart.
RX MEDLINE=98162622; PubMed=9501011;
RA Stehlik C., de Martin R., Binder B.R., Lipp J.;
RT Cytochrome inducible expression of porcine inhibitor of apoptosis
RL protein (Iap) family member is regulated by NF-kappa B.*;
CC Biochem. Biophys. Res. Commun. 243:827-832(1998).
CC -1 SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1 SIMILARITY: CONTAINS 2 BIR REPEATS.
CC -1 SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1 SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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CC -----
DR EMBL: U79142; AAC39171.1; -.
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001315; CARD.
DR InterPro: IPR001841; znf_fing.
DR Pfam: PF00653; BIR. 2.
DR Pfam: PF00619; CARD. 1.
DR SMART: SM00238; BIR. 2.
DR SMART: SM00184; CARD. 1.
DR SMART: SM00184; RING. 1.
DR PROSITE: PS01282; BIR_REPEAT_1; 2.
DR PROSITE: PS0143; BIR_REPEAT_2; 2.
DR PROSITE: PS50209; CARD. 1.
DR Apoptosis; zinc-finger; Repeat.
KW REPEAT 4 70 BIR 1.
FT REPEAT 90 157 BIR 2.
FT ZN_FING 311 345 RING-TYPE.
SO SEQUENCE 358 AA; 40977 MW; BE2268BA9A619044 CRC64;

Query Match 95.2%; Score 256; DB 1; Length 358;
Best Local Similarity 93.5%; Prod. No. 6.5e-26;
Matches 43; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

OY 1 LKACGFTYIGPDRVACFACGKSLNMPKDDAMSHRHPPNCP 46
   |||||||||||||||||||||||||||||||||||||||
DB 24 LKACGFTYIGPDRVACFACGKSLNMPKDDAMSHRHPPNCP 69

RESULT 4
ID BIR2_HUMAN STANDARD; PRT; 604 AA.
AC Q13489; Q16628; Q9UP46;
DT 01-NOV-1997 (Ref. 35, Created)
DT 01-NOV-1997 (Ref. 35, Last sequence update)
DT 20-AUG-2001 (Ref. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1 (INHIBITOR OF APOPTOSIS
DE PROTEIN 1) (H1A1) (H1A-1) (C-IAP2) (TNFR2-TRAF SIGNALING COMPLEX
DE PROTEIN 1) (IAP HOMOLOG C).
GN BIRC2 OR APL1 OR IAP1 OR MHC.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Heart.
RX MEDLINE=96128127; PubMed=8548810;
RA Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;
RT "The TNFR2-TRAF signaling complex contains two novel proteins related
RT to baculoviral inhibitor of apoptosis proteins.";
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RL Cell 83:1243-1252(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=liver;
RX MEDLINE=96149249; PubMed=8552191;
RA Liston P., Roy N., Tanai K., Lefebvre C., Baird S., Chertton-Horvat G.,
RA Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
RT Suppression of apoptosis in mammalian cells by NAIP and a related
RT family of IAP genes.*;
RL Nature 379:349-353(1996).
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE=Fetal liver;
RX MEDLINE=96209843; PubMed=8643514;
RA Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.;
RT "Cloning and expression of apoptosis inhibitory protein homologs that
RT function to inhibit apoptosis and/or bind tumor necrosis factor
RT receptor-associated factors.";
RL Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=99252096; PubMed=10233894;
RA Horrovetts A.J., Fontijn R.D., van Zonneveld A.J., de Vries C.J.,
RA ten Cate J.W., Pannekoek H.;
RT "Vascular endothelial genes that are responsive to tumor necrosis
RT factor-alpha in vitro are expressed in atherosclerotic lesions,
RT including inhibitor of apoptosis protein-1, stannin, and two novel
RT genes.";
RL Blood 93:3418-3431(1999).
CC -1 FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
CC WITH TNF RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
CC FORM AN HETEROOMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
CC NECROSIS FACTOR RECEPTOR 2 (TNFR2).
CC -1 SUBCELLULAR LOCATION: CYTOPLASMIC (POTENTIAL).
CC -1 TISSUE SPECIFICITY: HIGHLY EXPRESSED IN FETAL LUNG, AND KIDNEY. IN
CC THE ADULT, EXPRESSION IS MAINLY SEEN IN LYMPHOID TISSUES,
CC INCLUDING SPLEEN, THYMUS AND PERIPHERAL BLOOD LYMPHOCYTES.
CC -1 SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1 SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1 SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1 SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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CC -----
DR EMBL: L49432; AAC41943.1; -.
DR EMBL: U45876; AAC50371.1; -.
DR EMBL: U37546; AAC50507.1; -.
DR EMBL: AF070674; AAC83232.1; -.
DR MIM: 601712; -.
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001315; CARD.
DR InterPro: IPR001841; znf_fing.
DR Pfam: PF00653; BIR. 3.
DR Pfam: PF00619; CARD. 1.
DR Pfam: PF00097; zf-C3HC4; 1.
DR SMART: SM00238; BIR. 3.
DR SMART: SM00114; CARD. 1.
DR SMART: SM00184; RING. 1.
DR PROSITE: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
DR PROSITE: PS50209; CARD. 1.
DR Apoptosis; zinc-finger; Repeat.
KW REPEAT 29 96 BIR 1.
FT REPEAT 169 235 BIR 2.
FT REPEAT 255 322 BIR 3.
FT DOMAIN 447 525 CARD.
FT ZN_FING 557 591 RING-TYPE.
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DR EMBL; U45880; AAC50373.1; -
DR EMBL; U32974; AAC50518.1; -
DR EMBL; AL121601; CAB95312.1; -
DR MIM; 300079; -
DR InterPro; IPR001370; BIR.
DR InterPro; IPR001841; znf_ring.
DR Pfam; PF00653; BIR; 3.
DR Pfam; PF00097; zf-C3HC4; 1.
DR SMART; SM00238; BIR; 3.
DR SMART; SM00184; RING; 1.
DR PROSITE; PS01282; BIR_REPEAT_1; 3.
DR PROSITE; PS50143; BIR_REPEAT_2; 3.
KW Apoptosis; zinc-finger; Repeat; Thiol protease inhibitor.
DR Repeat; 26 93 BIR 1.
FT REPEAT 163 230 BIR 2.
FT REPEAT 265 330 BIR 3.
FT 2N_FING 450 484 RING-TYPE.
FT CONFLICT 162 162 S->P (IN REF. 1).
FT CONFLICT 423 423 Q->P (IN REF. 2).
SQ SEQUENCE 497 AA: 36684 MW: 90394C18D45EB635 CRC64;

Query Match 71.48; Score 192; DB 1; Length 497;
Best Local Similarity 73.98; Pred. No. 1.8e-17;
Matches 34; Conservative 1; Mismatches 11; Indels 0; Gaps 0;

QY 1 LARAGEFYIIGPDYVACFACGCKLSNWEPKDDAMSEHRRHFPNCF 46
DB 184 LASAGLYTYGIDGVOCFCGCKLNWBCDRAMSEHRRHFPNCF 229

RESULT 7

ID BIR_CHICK STANDARD; PRT; 611 AA.
AC 090660;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE INHIBITOR OF APOPTOSIS PROTEIN (IAP) (INHIBITOR OF T CELL APOPTOSIS
DE PROTEIN).
DE ITA.
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus
OX NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE= spleen;
RA Medigly M.R.; Kimpton W.G.; York J.C.; Connick T.E.; Lowenthal J.W.;
RT ITA, a vertebrate homologue of IAP that is expressed in T
RT lymphocytes. -;
RL DNA Cell Biol. 15:981-988(1996).
CC -1- FUNCTION: APOPTOTIC SUPPRESSOR (BY SIMILARITY).
CC -1- SUBCELLULAR LOCATION: PREDOMINANTLY NUCLEAR.
CC -1- TISSUE SPECIFICITY: CELLS OF THE T LYMPHOCYTE LINEAGE. FOUND IN
CC BOTH CORTICAL AND MEDULLARY CELLS OF THE THYMUS.
CC -1- DEVELOPMENTAL STAGE: HIGH LEVELS ARE INDUCED WITHIN 4-8 HOURS OF
CC T-CELL ACTIVATION IN SPLEEN AND THYMUS.
CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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CC or send an email to license@isb-sib.ch).

DR EMBL; U27466; AAA48118.1; -
DR InterPro; IPR001370; BIR.
DR InterPro; IPR001315; CARD.
DR InterPro; IPR001841; znf_ring.
DR Pfam; PF00653; BIR; 3.
DR Pfam; PF00619; CARD; 1.
DR Pfam; PF00097; zf-C3HC4; 1.
DR SMART; SM00238; BIR; 3.
DR SMART; SM00184; CARD; 1.
DR SMART; SM00184; RING; 1.
DR PROSITE; PS01282; BIR_REPEAT_1; 3.
DR PROSITE; PS50143; BIR_REPEAT_2; 3.
DR PROSITE; PS50209; CARD; 1.
KW Apoptosis; zinc-finger; Repeat; Nuclear protein.
DR Repeat; 30 97 BIR 1.
FT REPEAT 176 242 BIR 2.
FT REPEAT 262 329 BIR 3.
FT 2N_FING 564 598 RING-TYPE.
SQ SEQUENCE 611 AA: 69009 MW: 536C9136F34EBDD CRC64;

Query Match 71.08; Score 191; DB 1; Length 611;
Best Local Similarity 71.78; Pred. No. 2.9e-17;
Matches 33; Conservative 5; Mismatches 8; Indels 0; Gaps 0;

QY 1 LARAGEFYIIGPDYVACFACGCKLSNWEPKDDAMSEHRRHFPNCF 46
DB 196 VAKAGLDLDLTADKYACVNCVKLSNWEPKDDAMSEHRRHFPNCF 241

RESULT 8

ID BIR_MOUSE STANDARD; PRT; 496 AA.
AC 060869; 008865;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 4 (INHIBITOR OF APOPTOSIS
DE PROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED IAP)
DE (IAP HOMOLOG A) (MIAP3) (MIAP-3).
DE BIR4 OR API3 OR XIAP OR AIPX OR MIHA.
OS Mus musculus (mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6 X CBA; TISSUE= liver;
RA MEDLINE=96209843; PubMed=8643514;
RA Uren A.G.; Fekusch M.; Hawkins C.J.; Puls K.L.; Vaux D.L.;
RT Cloning and expression of apoptosis inhibitory protein homologs that
RT function to inhibit apoptosis and/or bind tumor necrosis factor
RT receptor associated factors. -;
RL Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
CC -1- FUNCTION: APOPTOTIC SUPPRESSOR (BY SIMILARITY).
CC -1- SUBCELLULAR LOCATION: CYTOPLASMIC (BY SIMILARITY).
CC -1- DEVELOPMENTAL STAGE: CASPASE-7 (BY SIMILARITY).
CC -1- TISSUE SPECIFICITY: CASPASE-7 (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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CC or send an email to license@lsb-stb.ch).

DR EMBL: U36842; AAC52594.1; -
DR EMBL: U88990; AAC58376.1; -
DR MGD: MGI:107572; Birc4.1; -
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001841; znf_rling.
DR Pfam: PF00653; BIR.3; znf_rling.
DR Pfam: PF00657; zf-C3HC4; 1.
DR SMART: SM00238; BIR.3;
DR SMART: SM00184; RING.1;
DR PROSITE: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
DR Apoptosis; Zinc-finger; Repeat.
FT REPEAT 26 93 BIR 1.
FT REPEAT 163 230 BIR 2.
FT ZN-FING 264 329 BIR 3.
FT ZN-FING 449 483 RING-TYPE.
FT CONFLICT 208 208 E->K (IN REF. 2).
FT CONFLICT 317 317 E->D (IN REF. 2).
FT CONFLICT 322 322 W->C (IN REF. 2).
FT CONFLICT 346 346 S->P (IN REF. 2).
FT CONFLICT 360 360 S->P (IN REF. 2).
FT CONFLICT 388 388 I->L (IN REF. 2).
FT CONFLICT 449 449 C->S (IN REF. 2).
FT CONFLICT 462 462 V->F (IN REF. 2).
FT CONFLICT 468 468 Y->A (IN REF. 2).
FT CONFLICT 490 490 K->N (IN REF. 2).
SQ SEQUENCE 496 AA; 56079 MW; EC5FAE0799F2CDD8 CRC64;

Query Match 69.5%; Score 187; DB 1; Length 496;
Best Local Similarity 71.7%; Pred. No. 7.9e-17;
Matches 33; Conservative 1; Mismatches 12; Indels 0; Gaps 0;

OY 1 LARAGFYTGPDVACACGKLSNWEKDDAMSEHRRHPNCPF 46
DB 184 LASAGLYTGADVDQVCCGCGKLNWEPCDRAMSEHRRHPNCPF 229

RESULT 9

ID BIR4_RAT STANDARD; PRT; 496 AA.
AC 099016;
DT 20-AUG-2001 (Rel. 40, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last sequence update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 4 (INHIBITOR OF APOPTOSIS
DE PROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED IAP)
DE (IAP HOMOLOG A) (RIAP3) (RIAP-3).
GN BIRC4 OR AIP3 OR XIAP.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RA Saito N.;
RT Rattus norvegicus X-linked inhibitor of apoptosis (riap3) mRNA.*;
RT Submitted (Oct-1999) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: APOPTOTIC SUPPRESSOR. INHIBITOR OF CASPASE-3 AND
CC CASPASE-7 (BY SIMILARITY).
CC -1- SUBCELLULAR LOCATION: CYTOPLASMIC (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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DR EMBL: AB033366; BA85304.1; -
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001841; znf_rling.
DR Pfam: PF00653; BIR.3; znf_rling.
DR Pfam: PF00657; zf-C3HC4; 1.
DR SMART: SM00238; BIR.3;
DR SMART: SM00184; RING.1;
DR PROSITE: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
DR Apoptosis; Zinc-finger; Repeat.
FT REPEAT 26 93 BIR 1.
FT REPEAT 163 230 BIR 2.
FT ZN-FING 264 329 BIR 3.
FT ZN-FING 449 483 RING-TYPE.
SQ SEQUENCE 496 AA; 56072 MW; E250E3C77461A469 CRC64;

Query Match 68.8%; Score 185; DB 1; Length 496;
Best Local Similarity 71.7%; Pred. No. 1.4e-16;
Matches 33; Conservative 1; Mismatches 12; Indels 0; Gaps 0;

OY 1 LARAGFYTGPDVACACGKLSNWEKDDAMSEHRRHPNCPF 46
DB 184 LASAGLYTGADVDQVCCGCGKLNWEPCDRAMSEHRRHPNCPF 229

RESULT 10

ID BIR1_HUMAN STANDARD; PRT; 1403 AA.
AC Q13075; Q13730; Q99796; Q75857;
DT 01-NOV-1997 (Rel. 35, Created)
DT 20-AUG-2001 (Rel. 40, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last sequence update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1 (NEURONAL APOPTOSIS
DE INHIBITOR PROTEIN).
GN BIRC1 OR NAIP.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominoidea; Homo.
OX NCBI_TaxID=9606;
RN [1]
RA Saito N.;
RT Tissue-specific brain.
RX MEDLINE-95112344; PubMed-7813013;
RX Roy N., Mahadevan M.S., McLean M., Shucder G., Yargagi Z.,
RX Farahani R., Baird S.D., Besner-Johnston A., Lefebvre C., Kang X.,
RX Salih M., Aubry H., Yamai K., Guan X., Ioannou P., Crawford T.O.,
RX de Jong P.J., Surh L., Ikeda J., Korneluk R.G., Mackenzie A.;
RT "The gene for neuronal apoptosis inhibitory protein is partially
RT deleted in individuals with spinal muscular atrophy.*"
RL Cell 80:167-178(1995).
RN [2]
RA Saito N.;
RT Tissue-specific brain.
RX MEDLINE-98163755; PubMed-9503025;
RX Chen Q., Baird S.D., Mahadevan M., Besner-Johnston A., Farahani R.,
RX Xuan J.-Y., Kang X., Lefebvre C., Ikeda J.-E., Korneluk R.G.,
RX Mackenzie A.;
RT "Sequence of a 131-kb region of 5q13.1 containing the spinal muscular
RT atrophy candidate genes SMN and NAIP.*"
RL Genomics 48:121-127(1998).
RN [3]
RA der Steege G., Draaijers T.G., Grootscholten P.M., Osinga J.,
RA Azevizo R., Veldma I., Brahe C., Scheffer H., Van Ommen G.J.B.,
RA Bays C.H.C.M.;
RT Submitted (May-1995) to the EMBL/GenBank/DBJ databases.

[illegible][illegible]

RA Huang S., Scharf J.M., Growney J.D., Endrizzi M.G., Dietrich W.F.;
RT "The mouse Naip gene cluster on Chromosome 13 encodes several distinct
functional transcripts."
RL Mamm. Genome 10:1032-1035(1999).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE-2041477; PubMed-10958627;
RA Endrizzi M.G., Hedinoto V., Growney J.D., Miller W., Dietrich W.F.;
RT "Genomic sequence analysis of the mouse Naip gene array."
RL Genome Res. 10:1095-1102(2000).
CC -1- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
CC SIGNALS.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL: AF007769; AAB69223.1; -
DR EMBL: AF135491; AAD56763.1; -
DR EMBL: AF242432; AAP82752.1; -
DR MGD: MG11298223; BIRcla.
DR InterPro: IPR001370; BIR.
DR Pfam: PF00653; BIR. 3.
DR SMART: SM00238; BIR. 3.
DR PROSITE: PS01282; BIR_REPEAT_1; 1.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
KW Apoptosis; Repeat; Multigene family.
FT REPEAT 60
FT REPEAT 159
FT REPEAT 227
FT REPEAT 345
FT CONFLICT 343 343 L -> V (IN REF. 2).
FT CONFLICT 359 359 L -> Q (IN REF. 2).
FT CONFLICT 624 624 E -> K (IN REF. 2).
FT CONFLICT 1092 1092 D -> E (IN REF. 3).
FT CONFLICT 1116 1116 D -> N (IN REF. 3).
FT CONFLICT 1123 1123 G -> R (IN REF. 3).
FT CONFLICT 1129 1129 L -> H (IN REF. 1).
FT CONFLICT 1140 1140 T -> M (IN REF. 2).
FT CONFLICT 1269 1269 A -> V (IN REF. 3).
SQ SEQUENCE 1403 AA; 158692 MW; B31630259595EB67 CRC64;

Query Match 52.4%; Score 141; DB 1; Length 1403;
Best Local Similarity 52.2%; Pred. No. 2, 1e-10;
Matches 24; Conservative 4; Mismatches 18; Indels 0; Gaps 0;

OY 1 LARAGFYIIGPDYVACFACGKLSNWEPRKDAISEHRHFPKCF 46
DB 181 LSAAGFVETGKRDYVQCFCGSLGNWEGSDDPKHAHWPKECF 226

RESULT 13
BIRE_MOUSE STANDARD; PRT: 1403 AA.
AC 09R016; 09R029; P81703; 009122; 009121;
DT 20-AUG-2001 (Rel. 40; Created)
DT 20-AUG-2001 (Rel. 40; Last sequence update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1E (NEURONAL APOPTOSIS
INHIBITORY PROTEIN 5).
GN BIRCL OR NAIPS OR NAIP-RS3.
OS Mus musculus (mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eulalia; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE-9943167; PubMed-10501978;

RA Huang S., Scharf J.M., Growney J.D., Endrizzi M.G., Dietrich W.F.;
RT "The mouse Naip gene cluster on Chromosome 13 encodes several distinct
functional transcripts."
RL Mamm. Genome 10:1032-1035(1999).
RN [2]
RP SEQUENCE FROM N.A.
RX STRAIN-129/SV;
RC MEDLINE-99417674; PubMed-10486205;
RA Endrizzi M., Huang S., Scharf J.M., Kelter A.R., Wirth B.,
Kunkel L.M., Miller W., Dietrich W.F.;
RT Comparative sequence analysis of the mouse and human Lgn1/5MA
RT interval."
RT Genomics 60:137-151(1999).
RN [3]
RP SEQUENCE OF 82-168 FROM N.A.
RC STRAIN-129/SV;
RX MEDLINE-97131520; PubMed-8975718;
RA Scharf J.M., Dameron D., Friesella A., Bruno S., Beggs A.H.,
Kunkel L.M., Dietrich W.F.;
RT "The mouse region syntenic for human spinal muscular atrophy lies
RT within the Lgn1 critical interval and contains multiple copies of Naip
RT exon 5."
RT Genomics 38:405-417(1996).
CC -1- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
CC SIGNALS.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -----
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CC -----
DR EMBL: AF135492; AAD56760.1; -
DR EMBL: AF131205; AAD56760.1; -
DR EMBL: U66326; AAC52574.1; -
DR MGD: MG11298220; BIRcla.
DR InterPro: IPR001370; BIR.
DR Pfam: PF00653; BIR. 3.
DR SMART: SM00238; BIR. 3.
DR PROSITE: PS01282; BIR_REPEAT_1; 2.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
KW Apoptosis; Repeat; Multigene family.
FT REPEAT 60
FT REPEAT 159
FT REPEAT 227
FT REPEAT 345
FT CONFLICT 92 92 K -> R (IN REF. 1).
FT CONFLICT 144 144 S -> R (IN REF. 1).
FT CONFLICT 242 242 S -> G (IN REF. 2).
FT CONFLICT 472 472 T -> A (IN REF. 2).
FT CONFLICT 516 516 A -> D (IN REF. 2).
FT CONFLICT 521 521 A -> T (IN REF. 2).
FT CONFLICT 533 533 V -> A (IN REF. 2).
FT CONFLICT 538 538 S -> I (IN REF. 2).
FT CONFLICT 1092 1092 E -> D (IN REF. 2).
FT CONFLICT 1129 1129 H -> L (IN REF. 2).
FT CONFLICT 1137 1137 V -> Q (IN REF. 2).
FT CONFLICT 1242 1242 V -> I (IN REF. 2).
FT CONFLICT 1276 1276 D -> N (IN REF. 2).
SQ SEQUENCE 1403 AA; 159695 MW; B27F645043BCB42 CRC64;

Query Match 52.4%; Score 141; DB 1; Length 1403;
Best Local Similarity 52.2%; Pred. No. 2, 1e-10;
Matches 24; Conservative 4; Mismatches 18; Indels 0; Gaps 0;

OY 1 LARAGFYIIGPDYVACFACGKLSNWEPRKDAISEHRHFPKCF 46
DB 181 LSAAGFVETGKRDYVQCFCGSLGNWEGSDDPKHAHWPKECF 226

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RESULT 14
BIRP_MOUSE STANDARD: PRT: 1403 AA.
ID BIRP_MOUSE
AC 09JIB6: P81704; 009122; 009121.
DT 20-AUG-2001 (Rel. 40, Created)
DT 20-AUG-2001 (Rel. 40, Last sequence update)
DE 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1F (NEURONAL APOPTOSIS
INHIBITOR PROTEIN 6).
GN BIRCF OR NAIP OR NAIP-R54.
OS Mus musculus (mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE-20414747; PubMed-10958627;
RA Endrizzi M.G., Hadinoto V., Growney J.D., Miller W., Dietrich W.F.;
RT "Genomic sequence analysis of the mouse Naip gene array."
RL Genome Res. 10:1095-1102(2000).
RP [2]
RP SPOUNCE OF 82-168 FROM N.A.
RC STRAIN-129/SVJ;
RX MEDLINE-97131520; PubMed-8975718;
RA Schaff J.M., Damron D., Friesella A., Bruno S., Beggs A.H.,
RN Kunzel L.M., Dietrich W.F.;
RT "The mouse region syntenic for human spinal muscular atrophy lies
within the 14q11 critical interval and contains multiple copies of Naip
exon 5."
RL Genomics 38:405-417(1996).
CC 1- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
CC SIGNALS.
CC 1- SIMILARITY: CONTAINS 3 BIR REPEATS.
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CC -----
DR EMBL; AF242431; AAF82751.1;
DR EMBL; U66327; AAC52975.1;
DR MCD; MG1:1298222; BIRCLF.
DR InterPro: IP001370; BIR.
DR Pfam: PF00653; BIR; 3.
DR SMART: SM00238; BIR; 3.
DR PROSITE: PS01282; BIR_REPEAT_1; 2.
DR PROSITE: PS01282; BIR_REPEAT_2; 3.
DR PROSITE: PS01282; BIR_REPEAT_3; 3.
KW Apoptosis; Repeat; Multigene family.
FT REPEAT 60 127 BIR 1.
FT REPEAT 159 227 BIR 2.
FT REPEAT 278 345 BIR 3.
SQ SEQUENCE 1403 AA; 159823 MW; 9D4912503358C4F9 CRC64;

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DE APOPTOSIS 2 INHIBITOR (INHIBITOR OF APOPTOSIS 2) (DIAP2) (DIAP) (IAP
DE HOMOLOG A) (IAP-LIKE PROTEIN) (DILP).
GN IAP2 OR IIP OR DIHA OR CG8293.
OS Drosophila melanogaster (fruit fly).
OC Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
OC Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
OC Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-Eye imaginal disk;
RX MEDLINE-96128128; PubMed-8548811;
RA Hay B.A., Massarman D.A., Rubin G.M.;
RT "Drosophila homologs of baculovirus inhibitor of apoptosis proteins
function to block cell death."
RL Cell 83:1253-1262(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-Embryo;
RX MEDLINE-96149249; PubMed-8552191;
RA Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Chertont-Horvat G.,
RA Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
RT "Suppression of apoptosis in mammalian cells by NAIP and a related
family of IAP genes."
RL Nature 379:349-353(1996).
RN [3]
RP SEQUENCE FROM N.A.
RC STRAIN-CANTON-S;
RX MEDLINE-96256286; PubMed-8654366;
RA Dickkett C.S., Nava V.E., Gedrich R.W., Clem R.J., van Dongen J.L.,
RA Clitallan M.C., Shelds H., Hardick J.M., Thompson C.B.;
RT "A conserved family of cellular genes related to the baculovirus IAP
gene and encoding apoptosis inhibitors."
RL EMBO J. 15:2685-2694(1996).
RN [4]
RP SEQUENCE FROM N.A.
RC STRAIN-CANTON-S;
RX MEDLINE-20196006; PubMed-10731132;
RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galie R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Mortman J.R., Vandeil M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers J.-H.C., Blazer R.G., Champe M., Pfeiffer B.D.,
RA Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA April J.F., Agbayani A., An H.-J., Andrews-Planckoch C., Baldwin D.,
RA Balow R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.V., Benos P.V., Bernan B.P., Bhandari D., Boltskov S.,
RA Borikova D., Botchan M.R., Bouck H., Brokstein P., Brothier P.,
RA Burtis J.M., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Cherry J.M., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferreira S., Fleischmann W.,
RA Foster C., Gabrielian A.E., Gary N.S., Gehart M., Glasser K.,
RA Glodok A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J., Hunk J.,
RA Hostli M., Kaulish F., Kerpen G.H., Ke Z., Kienison J.A., Ketchum K.A.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Lasko P., Lei T., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Liu X., Mattei B., McInosh K.C., McLeod M.P., McPherson D.,
RA Merkulyov G., Milshina N.V., Mobarry C., Morris J., Mosher A.,
RA Mount S.M., Moy M., Murphy B., Murphy L., Murty D.N., Nelson D.L.,
RA Nelson D.R., Nelson K.A., Nixon K., Nussken D.R., Poch O.J.M.,
RA Palazuelo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Shue B.C., Siden-Klamos I., Simpson M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,

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